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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,752	09/21/2005	Atsuyoshi Yano	1163-0541PUS1	1338
2292 7590 02/25/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER FAULK, DEVONA E	
			ART UNIT 2615	PAPER NUMBER
			NOTIFICATION DATE 02/25/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

10/549,752

Applicant(s)

YANO, ATSUYOSHI

Examiner

Devona E. Faulk

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 5 is/are pending in the application.
- 4a) Of the above claim(s) 2, 4 and 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/21/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/21/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. During a telephone conversation with Ali Imam (Reg. No. 58755) on 2/7/2008 a provisional election was made with traverse to prosecute the invention of Species 1, claims 2 and 5, based on the election/restriction below. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3,6-9 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Election/Restrictions*

2. This application contains claims directed to the following patentably distinct species.

**Species 1:** Claim 2 and 5 drawn to a 1<sup>st</sup> embodiment ( see page 5, line 7-page

9). **Species 2:** Claim 6 drawn to a 2<sup>nd</sup> embodiment (see page 10-page 11, line 18) .

**Species 3:** Claim 7 drawn to a 3<sup>rd</sup> embodiment (see page 11, line 20- page 15, line 7)).

**Species 4:** Claims 3 and 8 drawn to a 4<sup>th</sup> embodiment (see page 15, line 9-page 18,line 3).

**Species 5:** Claim 4 drawn to 5<sup>th</sup> embodiment (see page 18, line 5- page 22, line 13)

**Species 6:** Claim 9 drawn to a 6<sup>th</sup> embodiment (see page 22,line 15-page 23).

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

There is all examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.**

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the

election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Aso (US 5,485,543).

Regarding claim 1, Aso discloses a tone control apparatus which constitutes a tone control filter having a desired characteristic by inputting a filter factor into said tone control filter, and which adjusts a sound signal by making the sound signal pass through said tone control filter (Figures 1-4, with Figure 2 illustrating the analysis unit 1 of Figure 1, Figure 3 illustrating the parameter conversion unit of Figure 1 and Figure 4 illustrating the synthesis unit of Figure 1), characterized in that said tone control apparatus comprises:

a smoothing means for smoothing a Fourier spectrum of a desired filter response (analysis unit 1 of Figure includes a spectrum envelope generation unit 9 (see Figure 2) that determines the logarithmic spectrum; column 3, lines 11-14);

a cepstrum calculating means for calculating a cepstrum from the Fourier spectrum smoothed by said smoothing means (parameter conversion unit 2 of Figure 1 includes a cepstrum conversion unit 12 (see Figure 3) that generates cepstrum coefficients from the logarithmic spectrum envelope; column 3, lines 18-23) ; and

a filter factor calculating means for calculating said filter factor based on the cepstrum calculated by said cepstrum calculating means (synthesis unit 3 of Figure 1 includes a synthesizing filter unit 16 (see Figure 4) that forms a synthesized speech wave from the cepstrum coefficients; column 3, lines 28-33).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aso (US 5,485,543) in view of Vahatalo et al. (US 5,963,901).

Regarding claim 2, Aso discloses a filter factor inputted to a tone control filter ( cepstrum coefficients are input to synthesizing filter unit 16; See Aso as applied above in claim 1). Aso fails to disclose that the filter factor (coefficient) is a fixed filter factor calculated in advance. Vahatalo teaches of fixed filter coefficients calculated in advance (column 8, lines 50-52). It would have been obvious to modify Aso so that the coefficients are calculated in advance as taught by Vahatalo to facilitate faster processing.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aso (US 5,485,543) in view of Ho (US 5,495,432).

Regarding claim 5, Aso teaches of smoothing means for smoothing a Fourier spectrum by filtering a series of sampled values of the Fourier spectrum. Aso fails to disclose smoothing by using a low pass filter. Ho teaches of smoothing with a low pass filter (column 11, line 35-38). It would have been obvious to modify Aso by using a low pass filter to smooth the Fourier spectrum to improve the convergence performance.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



/Devona E. Faulk/  
Examiner  
Art Unit 2615  
2/12/2008